WHAT IS CLAIMED IS:

1. A hard disk drive comprising:

a rotatable disk having a magnetic recording media wherein the rotatable disk defines a plurality of concentric servo tracks;

a pivotable actuator that is movable with respect to the rotatable disk;

a transducer disposed on the actuator so as to be positioned with respect to selected ones of the plurality of concentric servo tracks;

a controller that controls the movement and position of the transducer with respect to the selected servo tracks;

a shock detection system that analyzes a signal indicative of a movement of at least a portion of the hard disk drive and determines whether the hard disk drive has experienced a shock event; and

a shock event logger that records information about the shock event as determined by the shock detection system.

2. The hard disk drive of Claim 1, wherein the shock event logger records the shock event information to a memory.

3. The hard disk drive of Claim 2, wherein the memory is a non-volatile memory.

4. The hard disk drive of Claim 3, wherein the non-volatile memory is a semiconductor memory.

5. The hard disk drive of Claim 3, wherein the non-volatile memory is a portion of the rotatable disk.

6. The hard disk drive of Claim 1, wherein the shock detection system comprises a shock sensor signal processor that analyzes a signal from a shock sensor.

7. The hard disk drive of Claim 6, wherein the shock sensor is an accelerometer that measures linear acceleration.

8. The hard disk drive of Claim 6, wherein the shock sensor is an accelerometer that measures rotational acceleration.

9. The hard disk drive of Claim 6, wherein the shock sensor comprises accelerometers that measure both linear and rotational accelerations.

10. The hard disk drive of Claim 1, wherein the shock detection system comprises a back-emf signal processor that analyzes a back-emf signal generated when the actuator moves.

11. The hard disk drive of Claim 1, wherein the shock detection system comprises a position error signal processor that analyzes the position error signal indicative of a position deviation of the transducer from a reference position.

12. The hard disk drive of Claim 11, wherein the position error signal processor determines that a shock event has occurred when the position error signal exceeds a predetermined threshold value.

13. The hard disk drive of Claim 12, wherein the predetermined threshold value is a position error signal representing approximately 32% of a track width.

14. The hard disk drive of Claim 12, wherein the shock event logger records the position error signal to the non-volatile memory.

15. The hard disk drive of Claim 14, wherein the shock event logger records position error signals corresponding to a plurality of shock events in a sequential manner.

16. The hard disk drive of Claim 14, wherein the shock event logger records the number of shock events in an incremental register.

17. The hard disk drive of Claim 14, wherein the shock event logger records a histogram of the position error signal, wherein the histogram represents a plurality of shock events.

18. The hard disk drive of Claim 1, wherein the shock detection system comprises a position error signal processor that monitors an elapsed time taken for the position deviated transducer to return to and maintain a position within a reference window for a predetermined time, wherein the position error signal processor determines that a shock event occurred when the elapsed time exceeds a predetermined duration.

19. The hard disk drive of Claim 18, wherein the predetermined duration is the time taken for a predetermined number of wedge-to-wedge time intervals encountered by the transducer, wherein the wedge-to-wedge time interval represents a unit of time that depends on the rotational speed of the disk and the number of servo wedges per servo track.

20. The hard disk drive of Claim 19, wherein the predetermined duration is 100 wedge-to-wedge time intervals.

21. The hard disk drive of Claim 19, wherein the predetermined duration is 300 wedge-to-wedge time intervals.

22. The hard disk drive of Claim 19, wherein the predetermined duration is 500 wedge-to-wedge time intervals.

23. The hard disk drive of Claim 18, wherein the shock event logger records the elapsed time to the non-volatile memory.

24. The hard disk drive of Claim 23, wherein the shock event logger records elapsed times corresponding to a plurality of shock events in a sequential manner.

25. The hard disk drive of Claim 23, wherein the shock event logger records the number of shock events in an incremental register.

26. The hard disk drive of Claim 23, wherein the shock event logger records a histogram of the elapsed time, wherein the histogram represents a plurality of shock events.

27. A method of logging shock events in a hard disk drive comprising a rotatable disk having a magnetic recording media, the method comprising:

monitoring a signal from a component of the hard disk drive that responds to at least one of displacement, velocity, or acceleration of at least a portion of the hard disk drive;

evaluating the signal to determine whether the at least one of displacement, velocity, or acceleration is a result of a shock event; and

recording information about the shock event.

28. The method of Claim 27, wherein recording comprises logging of information about the shock event to a non-volatile memory.

29. The method of Claim 28, wherein logging to the non-volatile memory comprises logging to a semiconductor memory.

30. The method of Claim 28, wherein logging to the non-volatile memory comprises logging to a portion the rotatable disk.

31. The method of Claim 28, wherein logging of the shock event information is done in a sequential manner.

32. The method of Claim 28, wherein logging of the shock event information comprises incrementing a register to keep track of the number of shock events detected.

33. The method of Claim 28, wherein logging of the shock event information comprises recording a histogram of the shock event information, wherein the histogram represents a plurality of shock events.